



*Understanding our users:
How to better deliver health information online to
American Indians and Alaska Natives*



Report to the Office of Disease Prevention and Health Promotion by:

Leslie D. Hsu
www.healthfinder.gov
Office of Disease Prevention and Health Promotion
U.S. Department of Health and Human Services
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For more information or to make comments or suggestions, please contact Leslie Hsu at lhsu@osophs.dhhs.gov or 202-401-0732.

ODPHP Staff

David Baker
Senior Publishing Advisor

Christy Choi
System Administrator

Mary Jo Deering, Ph.D.
Deputy Director for e-Health and Management

Leslie D. Hsu, M.P.H.
Project Manager
Lead on Special Populations Sections and Web Site Evaluations

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Executive Summary

The Office of Disease Prevention and Health Promotion conducted this qualitative study to build user-focused Web sites, especially for www.healthfinder.gov. This report presents findings from September 2002 users research conducted to better understand American Indian and Alaska Native (AIAN) online health information seekers.

Section Two describes the specific goals of the study and the report. Section Three provides background research to better understand the diverse AIAN populations. Section Four lays out the methods of the study, and Section Five summarizes the results for each goal of the study. Section Six outlines recommendations based on the research results.

Appendices A and B provide background information about Alaska and the Navajo Nation, respectively, where the interviews took place. Appendices C and D are tools that can be used as key building blocks for a health information Web site, especially for AIAN populations.



Source: Leslie Hsu, 2002

Figure 1: This ceremonial robe carved on cedar panels is on the wall outside the healing room in the Alaska Native Medical Center. It is one of numerous art pieces and exhibits that decorate the medical center. Art is integrated into the daily lives of American Indians and Alaska Natives, who believe that art speeds the healing process.

Section One: Introduction

The Office of Disease Prevention and Health Promotion (ODPHP) seeks to provide reliable health information for a variety of audiences through www.healthfinder.gov. (See figure 2.) Launched in 1997, www.healthfinder.gov is a portal site, linking the general public to quality health information resources. Known for being user friendly, www.healthfinder.gov is continuously evaluated by its users through interviews, usability tests, online comments, and expert reviews.

In fall 2002, ODPHP focused on expanding resources for American Indian and Alaska Native (AIAN) populations. From September 13, 2002, to September 30, 2002, ODPHP representatives met with AIAN leaders, patients, and students in Anchorage, Alaska; the Navajo Nation; and Denver, Colorado. Through interviews and usability tests, we collected qualitative data on how AIAN peoples access health information on the Internet. Because of its limited scope, this study is not representative of all AIAN people.

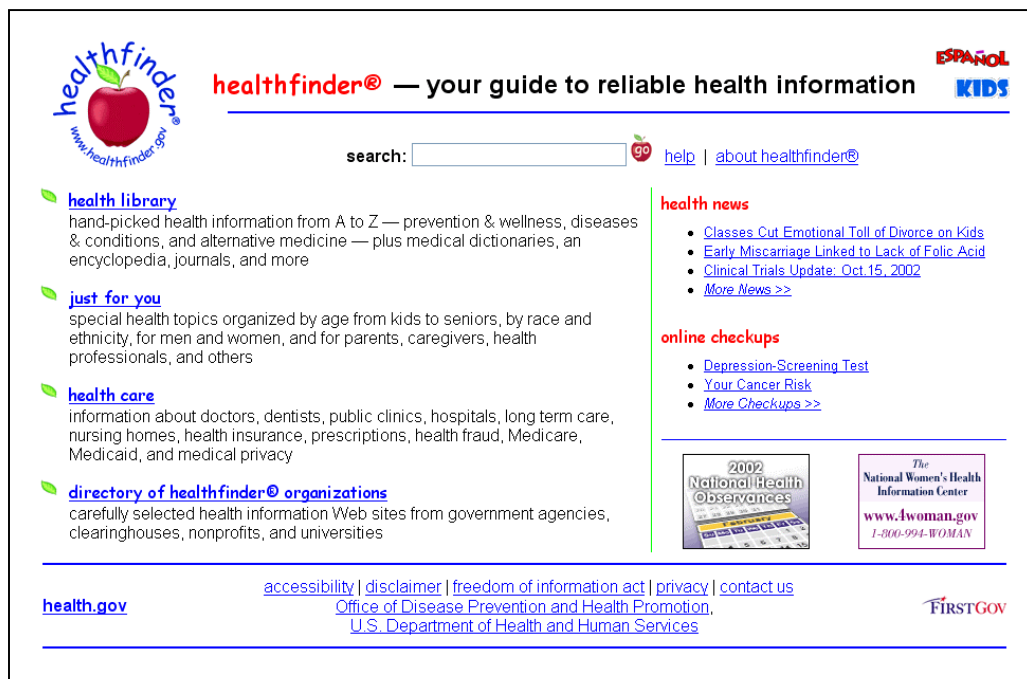


Figure 2: Screen capture of www.healthfinder.gov as of September 2002. This version was shown to our interviewees.

Section Two: Goals

Goals for the Study

Goal 1: To assess the range of health-information-seeking behaviors in the AIAN population

- Identify who their authoritative information sources are
- Discover when they would use health information
- Find out when they would look at the Internet, and why they would choose this option
- Name occasions when they would access healthfinder®

Goal 2: To identify tasks that AIAN individuals want to accomplish on a health information Web site

Goal 3: To understand how healthfinder® can best serve the AIAN population

- Learn how to improve our resources and the usefulness of healthfinder® for AIAN populations

Goal 4: To investigate the overall usability of healthfinder®

- Identify differences between expressed preferences for seeking health information and actual use
- Evaluate the main site's usefulness to special populations
- Compare navigation strategies on the entire site and in the "Just for You" section
- Explore users' patterns for searching and filtering

Goal 5: To understand how users experience the current "Just for You" section on healthfinder®

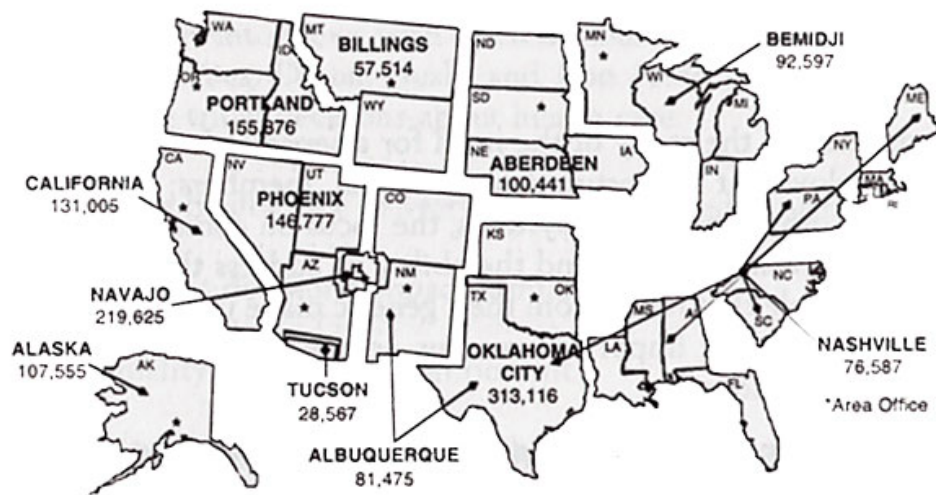
- Identify differences between expressed preferences and actual use
- Determine whether AIAN individuals want a separate section like "Just for You" or whether they would rather search the main healthfinder®
- Explore users' patterns for searching and filtering

Goals of This Report

This report summarizes the data we collected and provides recommendations related to improving resources for AIAN persons on a health information Web site. Specific recommendations for healthfinder® are not included in this report.

Section Three: Background Research

Nearly 4.1 million Americans identify themselves as American Indians and Alaska Natives, even though only 2.5 million Americans are enrolled as members of tribes with their own distinct languages, cultures, and governments.¹ Approximately 1.5 million AIAN persons use the Indian Health Service (IHS), the agency of the U.S. Department of Health and Human Services that is responsible for providing Federal health services to American Indians and Alaska Natives. IHS is organized into 12 area offices that oversee 150 service units. (See figure 3.)



Source: Trends in Indian Health 1998-99

Figure 3: Indian Health Service Area Offices, FY 2000.

Background on Tribes

The Federal Government has recognized 558 tribes located in 35 different States.² Approximately 229 of these tribes are in Alaska. (See appendix A for more information about Alaska.) Of the 558 tribes, the largest tribe is the Navajo Nation, which has about 250,000 members in 3 States and comprises nearly 10 percent of the American Indian population. (See appendix B for more information about the Navajo Nation).

In the 1950s, the Federal Government terminated 109 tribes by terminating their treaty rights. This action resulted in the destruction of their culture and a rise in alcoholism and suicide rates. Most reservation Indians were relocated to major urban areas.

¹ U.S. Census 2000 data

The Federal Government identifies Indians in four ways: (1) federally recognized tribes having a treaty with the Federal Government; (2) tribes recognized by the government and legislature of the State in which they reside; (3) terminated tribes for whom Congress has terminated all treaty rights; and (4) organized tribes recognized by neither the Federal nor State government but recognized as Indian.

² All statistics in this section of the report are from Mim Dixon and Yvette Roubideaux, eds. *Promises to Keep*. Washington, DC: APHA, 2001.

Urban Indians

Urban Indians, who are members of, or descendants of members of, one of the many Indian tribes, represent more than 56 percent of the total Native population.³

Urban Indians face unique health challenges. Few know that when tribal members leave their home reservation, they are covered by IHS for only 180 days. Urban Indians have access to urban health clinics,⁴ but few urban Indians are aware of these clinics and many are generally reluctant to use non-Indian, Government-sponsored resources.

Lack of health insurance is a serious problem for urban Indians. Only one in three AIAN persons was insured in 1999, and more than one-third of these reported no regular source of medical care.

Health Disparities

Significant health disparities exist for the AIAN population. The health status of this population continues to be worse than that of other races in this country. For Indian males, the top two leading causes of death are diseases of the heart and accidents. For Indian females, the top two causes are diseases of the heart and malignant neoplasms.

Death rates for the following causes were significantly higher for the AIAN population than for the general U.S. population: alcoholism (627 percent greater), tuberculosis (533 percent greater), diabetes mellitus (249 percent greater), accidents (204 percent greater), suicide (72 percent greater), pneumonia and influenza (71 percent greater), and homicide (63 percent greater).⁵ Many of these chronic diseases can be prevented by healthier lifestyles.

³ Cities with the highest numbers of American Indians and Alaska Natives are New York, Los Angeles, Phoenix, Anchorage, Tulsa, Oklahoma City, Albuquerque, Tucson, Chicago, San Antonio, Houston, Minneapolis, San Diego, Denver, San Jose, Fresno, Mesa, Dallas, Seattle, and Portland (Administration on Aging, 1990).

⁴ The clinics differ greatly from IHS facilities. They must charge for services and are required to offer services to anyone seeking assistance. Very few urban clinics offer more than general primary care services.

⁵ *Regional Differences in Indian Health 1998-99*. Indian Health Service. U.S. Department of Health and Human Services. Rockville, Maryland, 1999.

Section Four: Study Overview

This section identifies the research audiences and summarizes the research process.

Audience

ODPHP met with 85 AIAN individuals from 9 target populations (organized according to the context in which they might use the Internet to find health information).

- General public: Alaska Native patients
- General public: Navajo students
- Intermediary: Decisionmakers/influentials
- Intermediary: Health educators
- Intermediary: Nonprofit executives
- Intermediary: Field nurses/community health aides (representatives)
- Intermediary: Researchers
- Intermediary: Traditional healers
- Intermediary: Urban leader

Intermediaries were selected based on word-of-mouth recommendations. General public interviewees were recruited with fliers and posters.

To synthesize the research findings into a valuable tool for Web development, we extracted similarities to build audience profiles—*personas*. Appendix C provides brief personas of typical participants.

Methods

ODPHP representatives gathered information from interviews and surveys.

Interviews: From September 13 to September 27, 2002, ODPHP representatives conducted 18 one-hour interviews and usability tests with intermediary audiences. (See figure 4.) These interviews were in workplace environments. ODPHP representatives also conducted 15-minute interviews and usability tests with individuals. Table 1 identifies locations and audiences for these interviews. Additional information about the interviews and locations is provided in appendices A and B.

Surveys: A five-question survey was distributed during the Office of Minority Health (OMH) National Summit on Addressing Health Disparities for AIAN. Held in Denver from September 24 to 26, 2002, the summit was attended by tribal leaders, researchers, community leaders, urban Indians, representatives from academia, and advocates for improving AIAN health from all over the United States. ODPHP hosted an exhibit during the conference and invited feedback from all conference participants. Twenty-five surveys were completed.⁶

⁶ Tribes represented include Assiniboine, Choctaw, Colville, Hualapai, Iowa Tribe of Kansas-Nebraska, Lumbee Tribe of North Carolina, Navajo, Northern Ute, Oglala Sioux, Oglala Lakota, Omaha Tribe of Nebraska Osage/Cherokee, Northern Cheyenne, Penobscot, Prairie Band Potawatami/Cherokee, Round Valley Reservation, Ute, and Wailaki. Most of the 25 participants use Government sites to find health information, but only 6 have used healthfinder®.



Source: Susan Cuvillo, 2002

Figure 4: Leslie Hsu interviewing a student at Diné College Library.

Type of interview	Location	Audience
One-hour interviews	Alaska Native Medical Center (ANMC)	5 intermediaries
	Alaska Native Science Commission	1 intermediary
	Chinle Comprehensive Health Care Facility, Arizona	6 intermediaries
	Albuquerque Restaurant, New Mexico	1 intermediary
	Office of Minority Health Conference, Colorado	5 intermediaries
15-minute interviews	Health Information Center at Anchorage Native Primary Care Center of ANMC	21 patients
	Diné College Library, Arizona	21 students

Table 1: Locations and audiences for interviews.

Section Five: Research Results

This section summarizes the results for each goal.

Goal 1: To assess the range of health-information-seeking behaviors in the AIAN population

All AIAN interviewees had used computers before, although their skills varied. Intermediaries and college students had the most experience using computers. The location for going online varied. Intermediaries were more likely to use computers at work, whereas patients reported using computers at home, the medical center, and work.

Intermediaries

All the interviewed intermediaries use computers and the Internet to find health information, or they request staff to access the Internet on their behalf. A total of 56 percent use the Internet 8 to 50 hours per week. The intermediaries reported that they consider Government sites to be authoritative sources of information. A few of them currently use healthfinder® to access health information.

Patients and Students

Although most participants had used the Internet, most had not used healthfinder® (17 percent of Alaska Native patients and 0 percent of Navajo students) before our meeting. As many as 52 percent of the Alaska Native patients used the Internet to find health information. They had experience using sites such as WebMD, Yahoo, PubMed, the National Institutes of Health, and the *Anchorage Daily News*. A total of 62 percent of the Navajo students had used the Web to find health information. They also use Yahoo and WebMD.

In the rural areas, community health aides or community health representatives provide primary care and emergency care via telephone supervision or telemedicine. Recruited by the village, these individuals, who do not have any formal medical training, are responsible for delivering health information to tribal members. Community health aides or community health representatives are trained in basic first aid, patient education, health promotion, disease prevention, making home visits, taking vital signs, and assisting in case management. Some are Internet savvy and often e-mail the trainers to request additional health information.

Most Alaska villages have schools with computers and Internet capabilities. They also have clinics that sometimes offer computers. At Chickaloon Village, computers with Internet capability were reserved primarily for villagers to do job searches. (See appendix A, Chickaloon Village.) Reservations face significant economic barriers, such as high startup charges, to Internet access. Several technology initiatives are under way to address this problem; for example, one initiative seeks to connect tribal colleges with wireless technologies.

Mervin Savoy, Chairwoman of the Piscataway Conoy Confederacy and Subtribes, Inc., of Maryland, sends out health information regularly to her tribal members through e-mail. Tribal members contact her for reliable health information, especially for preventative care such as health screening tests.

That's another thing that they do: "Okay, have you done it?" If I haven't done it, they wait for me to do it. I've had more tests done that my doctor said I don't need. Still, if I want the rest of the tribal members to go in for some of these check-ups, I have to do it first.
~Mervin Savoy

Goal 2: To identify tasks that AIAN individuals want to accomplish on a health information Web site

To achieve this goal, interviewers gathered information specifically about what AIAN populations would do on a site.

Among the most significant tasks, from the perspectives of the AIAN population, are the following:

- Find information on traditional/holistic healing practice and methods
- Look up information about herbs
- Find updates on recent health news (daily)
- Learn how diabetes affects people
- Find information on alternative nutrition
- Find strategies for mental/spiritual wellness
- Gather information on exercise
- Determine risks
- Compare traditional ways to Western biomedicine
- Find user-friendly summaries of studies
- Gather information on drugs

Specific information on users and their tasks is provided in appendix D.

Goal 3: To understand how healthfinder® can best serve the AIAN population

Intermediaries were asked the question, "How can healthfinder® best serve AIAN populations?" Most respondents were very pleased that ODPHP was conducting these interviews. The face-to-face contact is extremely important when working with AIAN communities. It shows commitment and builds trust. In addition, this approach facilitates expert reviews, as Dr. Ted Mala, Director of Tribal Relations at the Alaska Native Medical Center, suggests:

I think that what you're doing is wonderful. I think it's extremely important for you to be here, extremely important for the face-to-face contact. I think that you should develop in your time here a list of people that your office can use to bounce things off with...people who are really in tune with the tribes to look at this and critique in a good way. ~Ted Mala

Many respondents also talked about how important it was to keep the information updated. Ursula Knoki-Wilson, Director of Midwifery Services at Chinle Comprehensive Health Care Facility, commented:

Keep it up and keep it updated. Come back again to field test. That's important because that's the way you get our opinions. You get consultation that way, whereas if you just have a telephone consultation, then you don't know the person. You don't know their commitment to it, and things like that. ~Ursula Knoki-Wilson

They also wanted more information about traditional healing, diabetes, domestic violence and sexual abuse, hepatitis, fetal alcohol syndrome, HIV/AIDS, environmental issues, asthma, eye care, Indian health policy, individual tribes and their culture, insurance policies, women's health, and research data.

Recommendations for improving the resources and usefulness of healthfinder® for AIAN populations are not included in this report.

Goal 4: To investigate the overall usability of healthfinder®

During our interviews, we asked participants to accomplish specific tasks. As evaluators, we watched participants interact with the interface. We noted the decisions and choices they made as they tried to perform efficiently. We were specifically interested in ascertaining the following information:

- Identify differences between expressed preferences and actual use (including patterns for searching and filtering)
- Evaluate the main site's usefulness to special populations
- Compare navigation strategies on the main site and "Just for You" section

Expressed Preferences Versus Actual Performance

When users were asked to perform a task on www.healthfinder.gov, 43 percent used the search bar, while 57 percent of users chose to accomplish the task by other means. (See table 2.)

	Search Bar	Health Library	Just for You	Health News	Online Checkups
One-hour interviews	5	4	1		
Alaska Native patients	5		4	2	
Navajo students	8	7	3	1	2
Total	18	11	8	3	2

Table 2: When users were asked to accomplish a task on healthfinder®, they chose to use these options on the site.

When using the text search bar, users expressed the following preferences. Some suggested that they wanted to be able to search within each section of www.healthfinder.gov, especially within the AIAN section, or have an advanced search option right next to the search bar.

Most felt that the search results were overwhelming. When they tried to narrow the search, all users could not figure out what the drop-down menu choices meant. (See figure 5.) The choices available in the drop-down menu for "type of information" were especially confusing to users.

healthfinder® — your guide to reliable health information

health library
just for you
health care
organizations

search: go help | about healthfinder®

[home](#) > [text search](#) > [asthma+native+american](#)

narrow your search

search:

resource type:

sort results by:

type of information:

health category:

languages:

Organization information is available only in English. healthfinder® continues to work with its partner organizations to increase the availability of information in other languages.

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KIDS

SPANOL

Figure 5: Screen capture of what users saw when they selected the “narrow your search” link while using the text search.

Patricia Cochran, Executive Director of the Alaska Native Science Commission, expressed her concern as she tried to gather information on asthma:

So I typed in Native American plus asthma. Two hundred documents—I don’t want to go through 200 documents. I’m trying to figure out a way that I don’t have to do this. I need to narrow this better. [User selects “narrow your search” link.] I just expanded from documents into documents and organizations. Best matches first. We’re going to leave that where it is. Types of information [paused for a while]...I think I’ll stay with all at this point, although I’m just concerned that we’re going to get back to the same thing as before. Well, this is interesting. I wonder what alternative medicine will bring up? Okay, so I’m keeping this in English, and I’m going to submit this. Okay, hmm. It says that the Internet resource I selected is based at a university. I’m just not exactly sure where I want to go with this.
~Patricia Cochran

For users who did not use the search bar, the experience was smoother. No user had problems looking up a topic alphabetically.

Oh, I see, there’s an alphabet. I love alphabets, so I would actually probably go under traditional or Native. [User selects Native Americans.] This is it. I love this right here. This is exactly where I would want to be, in something like this.” ~Marcia Anderson

One user expressed a preference for having the A-Z choice on her results page so that she would not have to keep going back to the A-Z list.

Destination Site Versus Linking Site

Before users select a document, most of them are not sure whether they are leaving www.healthfinder.gov. More experienced users are aware that they are leaving the site only because they wait for the page to load and check to determine whether the page looks different.

Previous usability tests demonstrated that users seemed to be confused about whether [healthfinder®](http://www.healthfinder.gov) is a portal site or a destination site. In this study, it seemed that users would wait until information loaded to figure out where they were. They did not seem to mind that it was a portal site. Users seemed to be most interested in finding information that supported them in answering specific questions they were researching.

Navigation Strategies on the Entire Site and the “Just for You” Section

Users navigated easily through www.healthfinder.gov using the browser’s Back button or selecting the “apple” logo or selecting Home. However, many users experienced trouble getting back to www.healthfinder.gov once they selected a document that automatically put them in a second window. Users who were more Internet savvy had no trouble closing the second window. However, if they did not know how to close the second window, they would continue using the browser Back button or try the browser Home button until they gave up.

Very few users noticed the “refine your search” link (shown in figure 6). One user selected “refine your search” because she wanted to narrow her search to Alaska Native. However, once this person saw the choices offered in the “refine your search” page, she got interested in “broader topics” (shown in figure 7).

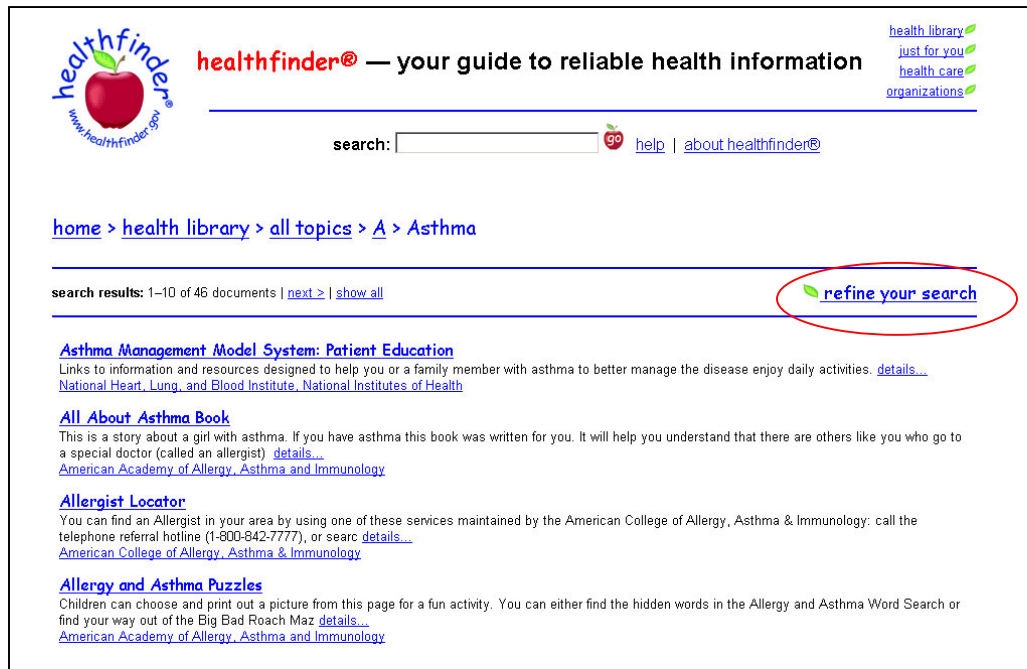


Figure 6: Screen capture of topic search page.

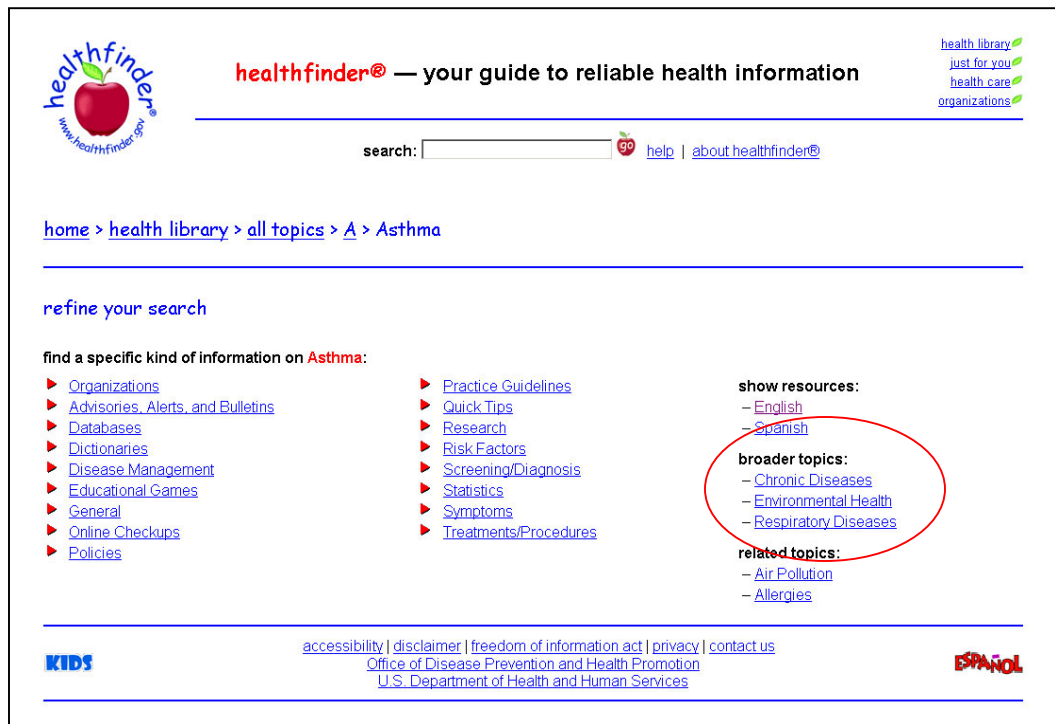


Figure 7: Screen capture of “refine your search” page.

Goal 5: To understand how users experience the current “Just for You” section on healthfinder®

Participants were asked how they experienced the current “Just for You” section. Specifically, they were asked to respond to the following requests:

- Identify differences between expressed preferences and actual use
- Specify whether AIAN users want a separate section such as “Just for You” or whether they would rather search the main healthfinder®
- Identify patterns for searching and filtering

Expressed Preferences Versus Actual Performance

When asked what people thought they would find at the “Just for You” link, the majority of participants expected information to be filtered specifically for them. Often they expressed the expectation of reading personal information.

I expected more “Just for You,” maybe like talk with your kids when they have problems with their health. ~Navajo student, age 53

I guess it pertains to you, as like your health and just some things that you’re curious about, like if you’re aching or something’s wrong with you. I thought there would be—I don’t know—just topics after topics about symptoms that you could develop. ~Navajo student, age 18

After they clicked on the “Just for You” link, we again asked participants if what they expected to find was already there. (See figure 8.) The results are provided in table 3. Even those who said that this was what they expected to find noted that there was a mix of audiences here. Most users thought the “Just for You” section was valuable and interesting.

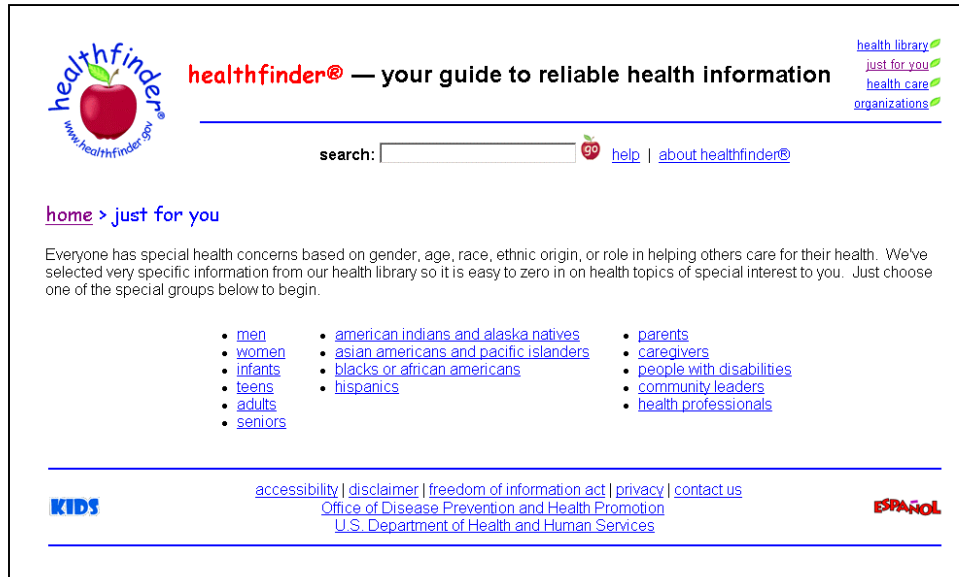


Figure 8: Screen capture of <http://www.healthfinder.gov/justforyou>.

	Yes	No
One-hour interviews	6	6
Alaska Native patients	15	6
Navajo students	12	9
Total	33	21

Table 3: Responses when asked, "Is this what you were expecting?" after showing participants the "Just for You" section.

Some confusion was caused by the differences in meaning in content groupings. For example, there is currently a list that includes men, women, infants, teens, adults, seniors, etc.

First of all, you're not going to have infants clicking on this, right? They don't know how to use a computer. My other thought was "What's the difference between a man, an adult, and a senior?" Can't you be all three? I would say a better way would be to break it down by ages: man, women. Maybe men on one side, then ages; women on another column and ages. So then the question is "Are you a man that's a parent? Are you a woman that's a parent? Are you a man that's a caregiver?" It's just a little confusing. ~Ted Mala

When users saw the prototype site (see table 4 and figure 9), the reaction was enthusiastic. Overall, their expectations were met because the users who answered "no" meant that they were surprised and pleased with what they found. In fact, all users said that the AIAN section was interesting and valuable to them. The medicine wheel image was well received, and all topics, especially "Traditional Medicine," elicited excited remarks, such as "This looks really really good." "I would send this out to my staff." "I'm clicking on traditional medicine because I can't stand it anymore." "Yeah, there's some good stuff here!"

	Yes	No
One-hour interviews	4	6
Alaska Native patients	14	7
Navajo students	11	10
Total	29	23

Table 4: Responses when asked, “Is this what you were expecting?” after showing participants the AIAN section.



Figure 9: Screen capture of prototype, as tested.

Preference for a Separate Section

When asked whether they would prefer to go to a “Just for You” section or to the main site for AIAN concerns, the majority of participants stated that they prefer an AIAN section. (See table 5.) However, they noted that they would prefer to see the AIAN section from the homepage, for example, a link directly to the AIAN section from the homepage.

	AIAN	Main Site	Both
One-hour interviews	5	1	9
Alaska Native patients	9	6	1
Navajo students	14	7	
Total	28	14	10

Table 5: Preference for a separate “Just For You” section for AIAN populations.

I’m really excited because what you’re doing with these cultural Web sites is really important. I’m excited you guys are considering this. I really admire this agency that’s doing this, to have this, to have somebody working on it. ~Marcia Anderson

User's Patterns for Searching and Filtering

When participants saw the top 20 topics, they were eager to dive into them and learn more about each topic. Some users did not see the A-Z list. However, once they did, they easily found their way to resources. The prototype did not have a search bar, so some people commented about wishing they could search within this section.

Section Six: Recommendations

This section provides general recommendations based on the research results. Recommendations specific to healthfinder® are not included.

Recommendations Regarding the Use of Visuals

For the Web site, intermediaries recommended using artwork or a graphic from various tribal regions, especially because AIAN populations believe that artwork inspires healing. (See figure 1.) For example, the medicine wheel is a symbol of health that originated with the Plains Indians, and the basket is a symbol of health in the Southwest and California.

"This symbol right in the center, as a Navajo person, I don't really relate to that symbol. It looks like it's a medicine wheel of some kind. A medicine wheel is not specific to Navajo culture. This is a symbol from Plains or other tribes that use a medicine wheel. But I think if this symbol periodically changed to other symbols from various tribes, it would be nice." ~ Ursula Knoki-Wilson

Recommendations Concerning Usability

Some general usability issues that require further testing include the following:

- Inexperience/confusion with the use of a second Web browser window to display linked sites.
- Text search results that produce an extremely large number of resources.
- Lack of familiarity with the terminology used to label advanced search options.
- Grouping of information into categories that match user expectations.
- Providing more instructional content on sites to help users determine where to go to get the specific answers they are seeking.

Section Seven: Conclusion

Web quality is judged by the ease with which diverse users enter the electronic environment and accomplish their goals. In our investigation of the AIAN population, we gathered significant information about various AIAN audiences and their reasons for visiting health-related Web sites and healthfinder® in particular.

Up-to-date content is very important to AIAN users who are searching for health-related information. Various strategies (such as Advisory/Review boards) should be examined for reviewing the content of health-related Web sites to ensure that it provides these populations with the information they need.

The tools in Appendices C and D are designed to be building blocks or foundations for better understanding what users want to accomplish on healthfinder® as well as other health information Web sites. These tools should be continually referred to throughout the Web development process.

Appendix A: Alaska Populations

This appendix provides information on the Alaska Native Claims Settlement Act (ANCSA), which differentiates Alaskan tribes from “reservation-based” tribes in the lower 48 States. The appendix also provides an example of one of the corporations, the Alaska Native Medical Center (ANMC), and supplies specific information on interviews conducted at the ANMC.

Alaska Native Claims Settlement Act

Unlike the lower 48 States where the United States established reservations for Native people, the U.S. Government took a different approach toward Alaska Natives. In 1971, the ANCSA authorized more than 200 Alaska Native villages and 13 regional corporations (see figure A-1) to take lands and become financial institutions. On the day the law was passed, all people of at least one-quarter Native blood quantum who enrolled to participate in ANCSA were issued shares of stock in Native corporations. Despite many challenges, these corporations have succeeded over the years, becoming leading business entities within Alaska.¹



Source: <http://litsite.alaska.edu/uaa/aktraditions/ancsa.html>

Figure A-1: Thirteen Alaska Native Regional Corporations.

Southcentral Foundation

The Cook Inlet Region, Incorporated, established a nonprofit regional health corporation, Southcentral Foundation (SCF), in 1982 to help the Native community within its geographic area to achieve physical, mental, emotional, and spiritual wellness. SCF was able to build programs specific to Alaska Native health issues, such as the Community Health Representative program, which brings care directly to the homes of Elders lacking mobility; the first fetal alcohol syndrome prevention program in the Nation; and the only minority organ and tissue program in Alaska. SCF also was able to deliver family medicine, dental care, and optometry programs directly to villages.

¹ McClanahan, AJ. *Growing Up Native in Alaska*. Anchorage: The CIRI Foundation, 2000.

Alaska Native Medical Center

Partnering with the Alaska Native Tribal Health Consortium (which manages statewide health services) and obtaining a self-governance agreement with the Indian Health Service, SCF built the culturally sensitive Alaska Native Medical Center (ANMC), which is beautifully decorated with Alaska Native art to inspire healing. (See figure 1 in the body of this report.)

The largest primary care clinic in Alaska, the Anchorage Native Primary Care Center of the ANMC, also was built by SCF. It is located across the street from the ANMC. (See figure A-2.) This care clinic features architecture inspired by Alaska's rivers, forests, and mountains. Alaska Natives from all over the State travel to the ANMC for a spectrum of health care, including traditional healing, chiropractic care, massage therapy, and acupuncture.



Source: Southcentral Foundation Report to the People 2002

Figure A-2: Air shot of Alaska Native Medical Center (in the background) and Anchorage Native Primary Care Center (in the foreground).

The ANMC offers patients a large health information center (see figure A-3) with 6 computers and 2 kiosks with CD-ROMs for searching health information. To the left of the health information center is the main lobby, which has an Internet café. The area to the right of the health information center houses the traditional healing program. Patients and their families relax in the lobby area, where a table is provided for people to hook up their laptops or for artisans to sell their crafts.



Source: Leslie Hsu, 2002

Figure A-3: Health Information Center with six computers, only two visible here.

Interviews

Both 1-hour and 15-minute interviews were conducted in Alaska at the ANMC. We also visited Chickaloon Village.

One-hour interviews in Alaska

- Dr. Ted Mala is Director of Tribal Relations, SCF, and Director of Traditional Healing, ANMC.
- Marcia Anderson is the Program Manager in the Health Education Department of the ANMC.
- Anne Girling is the librarian at the ANMC.
- Dorothy Hight is the coordinator of the Community Health Aid Program at the ANMC.
- Patricia Cochran is Executive Director of the Alaska Native Science Commission.
- India Hunter is a field nurse at the ANMC.

Fifteen-minute interviews in Alaska

A total of 21 Alaska Native patients were interviewed at the ANMC's Primary Care Center Health Information Center. Seven were male and 14 female, representing Aleut, Athabascan, Holikachuk, Inupiat, Tanacross, and Yupik tribes.

Chickaloon Village

Dr. Mala arranged a visit to Chickaloon Village about one hour north of Anchorage. Interviewers were given a tour of the school (see figure A-4) and the health care clinic. The school recently won an award from Harvard University for outstanding achievement. Its seven students have access to two computers. The clinic has two computers available for public use, but they are restricted to job searches since unemployment is extremely high. All clinic staff members appear to have their own Internet access.



Source: Leslie Hsu, 2002

Figure A-4: Chickaloon Village school.

Appendix B: Navajo Nation

This appendix provides information about the Navajo Nation, Chinle Comprehensive Health Care Facility, and Diné College. It also includes specific information about interviews conducted at these facilities as well as in Albuquerque and Denver.



Source: Leslie Hsu, 1998

Figure B-1: Monument Valley, Navajo Nation.

Breathtaking mesas, canyons, forests, and deserts swept by red sand offer a different perspective on reservation-based American Indians. The largest reservation encompasses more than 25,516 square miles in northern Arizona, western New Mexico, and southern Utah, with three satellite communities in central New Mexico.

The Navajo Area Indian Health Service (IHS) Office, located in Window Rock, Arizona, administers numerous clinics, health centers, and hospitals, providing health care to 201,583 members of the Navajo Nation. The Navajo Area Office coordinates with both the Phoenix and Albuquerque IHS Area Offices for the delivery of health services to the Navajo, Hopi, and Zuni reservations because these reservations are close to each other.

Comprehensive health care is provided to the Navajo people through inpatient, outpatient, contract, and community health programs centered in 6 hospitals, 7 health centers, and 12 health stations. School clinics and Navajo tribal health programs also serve the community. The 6 hospitals range in size from 39 beds in Crownpoint, New Mexico, to 112 beds at the Gallup Indian Medical Center in Gallup, New Mexico. Health centers operate full-time clinics, some of which provide emergency services. Some smaller communities have health stations that operate only part-time.

A major portion of the Navajo Nation healthcare delivery system is sponsored by the Navajo Tribe itself, which operates the Navajo Division of Health (NDOH) in Window

Rock, Arizona. The NDOH, created in 1977, has the mission of ensuring that quality and culturally acceptable health care is available and accessible to the Navajo people through coordination, regulation, and, where necessary, direct service delivery. The NDOH also provides a variety of health-related services in the areas of nutrition, aging, substance abuse, community health representatives (e.g., outreach), and emergency medical services (e.g., ambulance service).

Chinle Comprehensive Health Care Facility

Located near Canyon de Chelley National Monument, a sacred place for Navajo peoples, Chinle Comprehensive Health Care Facility (CCHCF) is a 60-bed hospital that serves as the healthcare hub for the region. The medical staff includes family physicians, internists, pediatricians, general surgeons, obstetrician/gynecologists, anesthesiologists, and a psychiatrist. Healthcare services are provided to approximately 37,000 active users.

Respect for Navajo cultural traditions shapes most of the programs at this facility. There is a hogan and a ceremonial room on the grounds, and an Office of Native Medicine enables Native practitioners and Western doctors to collaborate.

One-hour interviews at CCHCF

- Ursula Knoki-Wilson, CNM, is the Director of Midwifery Services.
- Marie Nelson is the Health Promotion Coordinator.
- Johnson Dennison is Coordinator of the Office of Native Medicine and a traditional Navajo healer.
- Lucinda Hogner is a public health nurse.
- Geraldine Yazzne is an office automation assistant in the Public Health Nursing Department.
- Karen Thomas is a public health nurse.

Diné College

Of 33 American Indian Higher Education Consortium member tribal colleges and universities, Diné College was the first college established by American Indians for American Indians. It remains the largest and oldest. This college serves the entire Navajo Nation, with an annual student enrollment of nearly 2,000 and 8 campuses. The Tsaile campus is designed to reflect the strength and dignity of Navajo culture and heritage, combining Navajo education with Navajo ceremonial life.

Fifteen-minute interviews at Diné College

A total of 21 Navajo students were interviewed at Diné College Library on the Tsaile campus, in a private room with a computer connected to the Internet. There were 8 male students and 13 females. All were Navajo.

One-hour interview in Albuquerque

- Chief Phil Crazy Bull is a Lakota medicine man.

One-hour interviews in Denver

- Judy Gobert is Director of Salish Kootenai College.
- Lena Belcourt is a legislative analyst at Rocky Boy's Reservation.
- Jerry Pardia is Executive Director of the National Tribal Environmental Council.
- Dr. Laura Williams is a member of the Juaneno-Acjachamen Nation and Project Director of the Association of American Indian Physicians.
- Mervin Savoy is Chairwoman of the Piscataway Conoy Confederacy and Subtribes, Inc., of Maryland.

Appendix C: Audience Profiles

Staff from the Office of Disease Prevention and Health Promotion (ODPHP) met with 85 American Indian and Alaska Native (AIAN) individuals from 9 target populations (organized according to the context in which they might use the Internet to find health information):

- General public: Alaska Native patients
- General public: Navajo students
- Intermediary: Decisionmakers/influentials
- Intermediary: Health educators
- Intermediary: Nonprofit executives
- Intermediary: Field nurses/community health aides (representatives)
- Intermediary: Researchers
- Intermediary: Traditional healers
- Intermediary: Urban leader

The purpose of a persona is to create sample audiences that can be compared when crafting electronic documents to suit many audience needs. User-experience research refers to persona development as a “necessary foundation of good interaction design.”¹ The purpose of the persona is not to provide information on a specific person; instead, personas serve as hypothetical archetypes of actual users. The personas developed in this study are based on the experiences of the interviewers.

Alaska Native Patients

The typical Alaskan Native patient is 40 years old (we interviewed people ranging in age from 13 to 70) and is employed in a low- or middle-income job or works in a creative capacity (such as craft-making). The typical Alaska Native patient has finished high school but does not have an advanced degree. English is the main language spoken in his or her home.

The typical Alaska Native patient has used a computer, often both at work and at home and at the Alaska Native Medical Center (although the typical user defines his or her computer skills as limited). The typical Alaska Native patient is familiar with the Internet. This audience member has not used healthfinder®. When online, he or she visits a variety of sites, using MSN and Hotmail for e-mail.

The Alaska Native patient identifies being healthy as being “emotionally, physically, and spiritually well.” Eating right and exercise are important to this user.

Navajo Students

The typical Navajo student is 23 years old (we interviewed people who ranged in age from 16 to 53) and typically identifies himself or herself as a full-time student rather than as part of the labor pool. The typical Navajo student has finished high school and speaks English outside the home. (A total of 38 percent of students interviewed speak Navajo at home.)

¹ A good introduction to personas in user-experience research can be found in Alan Cooper, *The Inmates Are Running the Asylum: Why High-Tech Products Drive Us Crazy and How to Restore the Sanity*. Indianapolis: SAMS Press, 1999.

The typical Navajo student uses a computer and the Internet regularly, at school, at the library, and at home. The typical student's skill level could be considered advanced. About 62 percent use the Internet to find health information, but none have used healthfinder®. When members of the Navajo student audience group go online, it is likely that they will use Yahoo, CNN, MSN, and Ebay.

The typical Navajo student identifies being healthy as exercising; eating right; taking care of oneself; being free of trouble; and integrating mind, body, and spirit.

Decisionmakers/Influentials

To meet a member of the decisionmakers/influentials audience is to meet someone who manages health services and takes an active advising role beyond his or her immediate work environment. As a physician or someone with a traditional healing background, this audience member interacts with others at a national level and engenders a great deal of respect from community members.

The typical influential uses computers and the Internet frequently (approximately 20 hours a week). These individuals are very Internet savvy and use cable modems at home. Often on the road, they travel with wireless laptops, so that they are always connected to the Internet. They frequently use the Internet to find health information for themselves and for others. Members of this group use healthfinder®, MedLinePlus, CDC, and PubMed.

The typical decisionmaker/influential identifies being healthy as being mentally, emotionally, physically, and spiritually well; getting immunized (and undergoing screenings); exercising right; and attending to "mind, body, spirit, and heart."

Health Educators

The typical health educator provides a broad spectrum of community health education and prevention programs. He or she spends time training other health educators, adapting prevention messages to cultural and traditional ways, teaching strategies for injury prevention, offering programs to the elderly, and supporting healthy eating and exercise regimens. This person often manages a team of other health educators.

The typical health educator has computer skills but is likely to delegate computer tasks rather than to work on the computer himself. This individual relies on the computer at the office but is sometimes connected at home. Online chat provides one route for gathering and sharing information. This person has some familiarity with healthfinder® and uses it as one choice for finding health information. This audience member likes the choices available in the prototype version of healthfinder®'s AIAN section and plans to share this information with staff members and patients.

The health educator wants to be able to respond to his or her clients and searches to find additional information. One health educator commented: "The main thing is, I want to gain knowledge of the choices that are up there. We need to know the good and the bad because there is so much quackery in health information. I like to know all and see all." As an educator, this audience member is looking at information to pass on to others and sometimes incorporates information into teaching materials. This audience prefers finding its way online without struggling with "a lot of words."

Traditional healing is important to the health educator. This person identifies being healthy as being well as a whole person, mentally, emotionally, and spiritually. To this audience member, being fit extends to "being open to helping others."

Nonprofit Executives

The typical nonprofit executive works for a research or advocacy organization and has an advanced degree.

The typical nonprofit executive uses a computer both at the office and at home, typically around 10 hours a week. This audience member travels to conferences to speak on issues such as the environment and serves as a "clearinghouse" for tribes to help them get funding. Nonprofit executives use the Internet frequently and are very savvy at finding information online. This audience member has not used healthfinder® and is more likely to go to EPA, CDC, and AOL.

The nonprofit executive identifies being healthy as being physically, emotionally, and spiritually well. This audience is likely to believe that "all things are connected." Healthy living depends on a healthy environment for this audience member.

Field Nurses/Community Health Aides (Representatives)

The typical field nurse travels to rural areas and provides care for her constituents, whereas a community health aide (called a community health representative in the lower 48 States) is recruited by a village. The field nurse will have received formal nursing training, whereas the community health aide is trained in basic first aid, patient education, health promotion, disease prevention activities, making home visits, taking vital signs, and assisting in case management. The community health aide provides primary care and emergency care via telephone supervision or telemedicine with physicians or nurses. Because field nurses and community health aides work together to provide care to individuals who live in remote areas, one can think of them as serving one role.

The typical field nurse/community health aide has intermediate computer skills but works on a computer for only 3 or so hours a week. A field nurse/community health aide is likely to delegate finding specific information to an administrative assistant who will print out the information for the field nurse to take into the community.

These audience members are not familiar with healthfinder®, but they can see how it will benefit them on the job. In fact, they plan to use healthfinder® as a key resource. They like that they can take Internet information via printouts to their populations. These audience members are likely to get information from PubMed, Yahoo, and the Indian Health Service.

The field nurse/community health aide identifies being healthy as being able to participate in activities that one enjoys. This requires an understanding of diet, nutrition, and exercise.

Researchers

The typical researcher has an advanced degree and works as a librarian or legislative analyst or has a background in public health. Computer savvy, the researcher understands both hardware and software and trains others on using computer systems. It is likely that the researcher will be working on technology initiatives to support tribes. For example, a researcher might explore wireless technology because of the high costs involved in using expensive telephone-based phone systems.

The typical researcher will use the Internet from 25 to 40 hours a week. This person logs on to the Internet at work, at home, and when traveling. His or her computer skills can be considered advanced. This audience member is likely to depend on search engines and will visit health sites such as healthfinder®, MedlinePlus, PubMed, and MDConsult and legal sites such as Thomas.

This person identifies being healthy with receiving a healthy amount of funding to support good health in clinics and schools. To imagine a healthy person, the researcher might be inclined to visualize a runner.

Traditional Healers

The typical traditional healer works in the community and provides emotional, spiritual, holistic support and medical care. This audience member conducts ceremonies and provides counseling to people in the tribes. It is likely that this person works collaboratively with Western doctors to combine traditional medicine with Western biomedicine and often speaks at conferences or workshops.

The traditional healer rarely uses the Internet. For those who do use the Internet, they would spend approximately 1 hour a week, typically in the office but sometimes at home. Healers find they do not have the time themselves but request staff members to gather information online and synthesize the information before a workshop or talk. They are often interested in learning more about Western perspectives and ensuring that their proposed solutions do not conflict with other approaches.

The traditional healer is not likely to get information from the Internet, but when seeking information, is likely to gather data from the Indian Health Service. The traditional healer is not familiar with healthfinder®.

Traditional healers are concerned about the way traditional care information can be misused by fraudulent practitioners. They do see value in providing instruction on how to approach a traditional healer and what to expect from the interaction.

According to the traditional healer, a healthy person is emotionally balanced, physically fit, and mentally prepared for each day. Recognizing spirituality is important to the healthy person, according to this audience member.

Urban Leader

The urban leader faces unique challenges providing healthcare information to his or her constituents because urban American Indians are not covered by health insurance and are reluctant to use non-Indian, Government-sponsored resources. The typical urban leader advocates for his or her constituents and speaks about issues facing urban Indians.

This audience member uses the Internet 15 hours a week and connects at work, at home, and on the road. He or she is likely to gather information about health issues and political challenges and then disseminate it to the constituents. The urban leader is likely to go to the site Indianz.com, CDC, and local university resources. This audience is familiar with healthfinder®.

The urban leader identifies being healthy as living a low-stress life and making healthy lifestyle choices, for example, eating healthy foods.

Appendix D: User Task Matrix

	General Public: Alaska Native Patients	General Public: Navajo Students	Intermediary: Decisionmakers/ Influentials	Intermediary: Field Nurses	Intermediary: Health Educators	Intermediary: Nonprofit Executives	Intermediary: Researcher	Intermediary: Traditional Healers	Intermediary: Urban Leader	Total	Average
Tasks											
Find information on traditional/holistic healing practice and methods	3	3	3	3	3	3	3	3	3	27	3.00
Look up information about herbs	3	3	3	3	3	3	3	3	3	27	3.00
Find updates on recent health news (daily)	3	3	3	3	3	3	3	3	3	27	3.00
Learn how diabetes affects people	3	3	3	3	3	3	3	3	3	27	3.00
Find information on alternative nutrition	3	3	3	3	3	3	3	3	3	27	3.00
Find strategies for mental/spiritual wellness	3	2	3	3	3	3	3	3	3	26	2.89
Gather information on exercise	3	3	3	3	2	3	3	3	3	26	2.89
Determine risks	3	3	2	3	3	3	3	3	3	26	2.89
Compare traditional ways to Western biomedicine	3	2	3	3	3	3	3	3	3	26	2.89
Find user-friendly summaries of studies	2	2	3	3	3	3	3	3	3	25	2.78
Gather information on drugs	3	3	3	3	3	2	2	3	3	25	2.78
Find studies on successful treatment	3	2	3	3	3	2	3	3	3	25	2.78
Find explanations of medical terms in layman's words	3	3	2	3	3	2	2	3	3	24	2.67
Read about new developments in cancer	3	3	2	3	2	2	3	3	3	24	2.67
Find ways to lose weight	3	3	2	3	3	2	2	3	3	24	2.67
Look for contacts	2	2	3	3	3	3	3	2	3	24	2.67
Gather information on alcoholism	3	3	3	3	3	2	1	3	3	24	2.67
Discover how Native people deal with domestic violence	3	3	3	3	3	1	3	2	3	24	2.67
Find information on preventing alcohol-related injury	3	3	3	3	3	1	3	2	3	24	2.67
See successful programs for using traditional ways	2	2	3	3	3	3	3	3	2	24	2.67
Find information on viruses	1	1	3	3	3	3	3	3	3	23	2.56
Differentiate good health information from quackery or biased sources	3	3	3	3	3	1	1	3	3	23	2.56

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November 1, 2002

	General Public: Alaska Native Patients	General Public: Navajo Students	Intermediary: Decisionmakers/ Influentials	Intermediary: Field Nurses	Intermediary: Health Educators	Intermediary: Nonprofit Executives	Intermediary: Researcher	Intermediary: Traditional Healers	Intermediary: Urban Leader	Total	Average
Tasks											
Find health statistics	1	2	3	3	3	3	3	2	3	23	2.56
Find information on hepatitis (especially hepatitis C)	3	3	2	3	3	0	3	3	3	23	2.56
E-mail information to family or friend	2	3	3	3	3	3	3	0	3	23	2.56
Learn more about depression	3	3	3	3	3	1	1	3	3	23	2.56
Find information on immunizations	1	1	3	3	3	3	3	3	3	23	2.56
Differentiate among patient health choices	3	2	3	3	3	1	1	3	3	22	2.44
Gather information on smoking	3	3	3	3	3	1	2	2	2	22	2.44
Find explanations of medical terms in layman's words	3	3	1	3	3	2	1	3	3	22	2.44
Look up information on HIV/AIDS	3	3	1	3	3	1	2	3	3	22	2.44
Find information on cardiovascular disease	3	3	1	3	3	1	2	3	3	22	2.44
Find information on fetal alcohol syndrome	3	3	1	3	3	1	2	3	3	22	2.44
Find information on sexual abuse	3	3	1	3	3	1	2	3	3	22	2.44
Find new studies (What's New)	1	1	3	3	3	2	3	3	3	22	2.44
Find tribe-specific information	3	3	3	3	3	3	2	1	1	22	2.44
Learn strategies for diet and exercise	3	3	2	3	3	1	1	2	3	21	2.33
Find information on cancer	3	3	1	2	2	2	2	3	3	21	2.33
Print patient education information	3	2	3	3	3	1	1	2	3	21	2.33
Relate information to specific region	2	2	3	2	2	3	3	2	2	21	2.33
Find out current guidelines at CDC	0	0	3	3	3	3	3	2	3	20	2.22
Learn more about Medicare and Medicaid	3	2	3	3	3	1	0	2	3	20	2.22
Find information on methamphetamine	2	2	1	3	3	1	2	3	3	20	2.22
Differentiate among insurance policies	3	1	3	3	3	0	2	2	3	20	2.22
Find information on STDs	3	3	1	3	3	1	1	2	3	20	2.22
Learn more about hypertension	3	2	1	3	3	2	1	2	3	20	2.22
Get information on communicable diseases	2	3	3	3	3	1	1	2	2	20	2.22
Discover how Native people deal with homicide	1	1	3	3	3	1	3	2	3	20	2.22
Look up information on asthma	3	2	1	3	3	3	1	2	2	20	2.22
Relate health concerns to environment	2	2	2	2	2	3	3	2	2	20	2.22

	General Public: Alaska Native Patients	General Public: Navajo Students	Intermediary: Decisionmakers/ Influentials	Intermediary: Field Nurses	Intermediary: Health Educators	Intermediary: Nonprofit Executives	Intermediary: Researcher	Intermediary: Traditional Healers	Intermediary: Urban Leader	Total	Average
Tasks											
Provide context to current health policy with historical information	2	2	3	2	2	2	3	1	3	20	2.22
Identify plants used in traditional healing	3	2	3	3	3	0	3	0	2	19	2.11
Explore relationship of spirituality	2	1	3	2	2	2	2	3	2	19	2.11
Look for comparative information between self-government and direct-service tribes	1	1	3	2	2	2	3	2	3	19	2.11
Find general information about Indian culture	1	1	2	3	3	3	3	0	3	19	2.11
Look up diagnoses	3	2	1	2	2	1	1	3	3	18	2.00
Compare symptoms to diseases	3	2	1	2	2	1	1	3	3	18	2.00
Learn more about TB	2	2	2	3	3	1	1	2	2	18	2.00
Find fitness programs	3	3	1	3	3	2	0	0	3	18	2.00
Look for data sorted by community	0	2	3	2	2	3	3	0	3	18	2.00
Find information about epidemiological data	0	0	3	2	2	3	3	2	3	18	2.00
Read stories of healing	2	2	2	2	2	2	2	2	2	18	2.00
Explore legislation being considered in Congress	0	1	3	2	2	3	3	1	3	18	2.00
Find information on eye care	2	2	1	3	3	1	1	2	2	17	1.89
Send resource link to staff members and constituents	0	0	3	2	3	3	3	0	3	17	1.89
Find healthful recipes	3	2	3	3	3	0	0	0	3	17	1.89
Find funding	0	0	3	1	2	3	3	2	3	17	1.89
E-mail information about alternative care	2	2	3	2	3	0	1	1	3	17	1.89
Differentiate among different tribes (cultural differences)	1	0	2	3	3	3	3	1	1	17	1.89
Download a calorie counter	3	3	0	2	3	1	1	0	3	16	1.78
Find information on urinary tract Infections	2	3	0	3	2	1	1	2	2	16	1.78
Find information on divorce	2	2	0	3	3	1	1	2	2	16	1.78
Download curriculum	0	0	3	3	3	2	2	0	2	15	1.67
Locate information on health screening locations	3	3	2	2	2	2	1	0	0	15	1.67
Find information on first aid	3	3	0	2	2	0	0	1	3	14	1.56
Educate people about hygiene	0	0	1	3	3	3	0	1	3	14	1.56

	General Public: Alaska Native Patients	General Public: Navajo Students	Intermediary: Decisionmakers/ Influentials	Intermediary: Field Nurses	Intermediary: Health Educators	Intermediary: Nonprofit Executives	Intermediary: Researcher	Intermediary: Traditional Healers	Intermediary: Urban Leader	Total	Average
Tasks											
Compile lists of health do's and don'ts	0	0	3	0	3	3	3	0	2	14	1.56
Get Alaska-specific information	3	0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	14	1.50
Build customized information pages (relate information specifically to own needs)	3	3	0	1	1	2	0	0	3	13	1.44
Get information about fevers	1	1	0	3	3	1	1	2	1	13	1.44
Learn about health by reading others' stories	3	2	1	0	2	0	0	2	3	13	1.44
Locate hospitals	3	2	1	1	1	0	0	1	3	12	1.33
Discover high risks for surgery	3	1	0	1	1	0	0	2	3	11	1.22
Cross reference what other countries are doing	0	0	3	2	2	2	2	0	0	11	1.22
Look up information about how babies develop	2	3	0	1	1	0	0	1	2	10	1.11
Find information about birth	2	3	0	1	1	0	0	1	2	10	1.11
Read about benefits of massage	1	1	1	1	2	1	1	1	1	10	1.11
Download illustrations to use in teaching	0	0	3	1	3	1	1	0	1	10	1.11
Get images of skin problems	0	0	2	2	3	1	1	0	1	10	1.11
Compare cultural practices in other ethnic groups	0	0	2	1	1	1	0	3	0	8	0.89
Chat with health professionals	3	2	0	0	0	0	0	0	3	8	0.89
Chat with support groups	3	2	0	0	0	0	0	0	3	8	0.89
Cross reference healing information with anthropological information	0	0	3	2	2	0	0	0	0	7	0.78
Take interactive tests of health knowledge	1	2	0	0	3	0	0	0	0	6	0.67
Find information on sports medicine	1	3	0	0	1	0	0	0	0	5	0.56
Identify schools for nursing	0	3	0	1	0	0	0	0	0	4	0.44
Research childbirth practices	0	0	1	1	1	0	0	1	0	4	0.44
Buy medical instruments	0	0	1	2	0	0	1	0	0	4	0.44
Explore hormone replacement therapy data — qualify studies	0	0	1	2	0	0	0	0	0	3	0.33
Buy health-related products such as vitamins	1	0	0	0	0	2	0	0	0	3	0.33